PCT

INTERNATIONAL SEARCH REPORT

(PCT Articl 18 and Rules 43 and 44)

Applicant's or agent's file reference	FOR FURTHER see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.					
365.100 ACTION						
International application No.	International filing date (day/month/year)	(Earliest) Priority Date (day/month/year)				
PCT/US 99/09346	30/04/1999	01/05/1998				
Applicant						
CHIRON CORPORATION et al.						
This International Search Report has been according to Article 18. A copy is being tra	n prepared by this International Searching Auth ansmitted to the International Bureau.	ority and is transmitted to the applicant				
This International Search Report consists X It is also accompanied by	of a total ofsheets. a copy of each prior art document cited in this	report.				
Basis of the report						
a. With regard to the language, the	international search was carried out on the bas ess otherwise indicated under this item.	is of the international application in the				
the international search w	as carried out on the basis of a translation of th	ne international application furnished to this				
, "	d/or amino acid sequence disclosed in the interest appearance listing:	ternational application, the international search				
1 =	onal application in written form.					
🖳	rnational application in computer readable form	1.				
	this Authority in written form. this Authority in computer readble form.					
X the statement that the sub	osequently furnished written sequence listing do	pes not go beyond the disclosure in the				
l — ''	international application as filed has been furnished. the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished					
2. Certain claims were fou	nd unsearchable (See Box I).					
3. X Unity of invention is lacking (see Box II).						
4. With regard to the title,						
X the text is approved as su	bmitted by the applicant.					
the text has been established by this Authority to read as follows:						
5. With regard to the abstract,						
X the text is approved as su	bmitted by the applicant.					
	hed, according to Rule 38.2(b), by this Authority date of mailing of this international search rep					
6. The figure of the drawings to be publ	ished with the abstract is Figure No.	1a				
as suggested by the appli	cant.	None of the figures.				
X because the applicant fail	because the applicant failed to suggest a figure.					
because this figure better	characterizes the invention.					

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

Invention 1. Claims: 1,3,16,18 (all completely); 2,4-15,17 (all partially)

A protein comprising the amino sequence of SEQ ID NO:2790 or comprising a fragment of at least 7 (preferably consecutive) amino acids of said SEQ ID NO; a protein with 50% or greater homology to said protein(s); an antibody binding to said protein(s); a nucleic acid encoding said protein(s), preferably comprising the nucleotide sequence of SEQ ID NO:2789 or a fragment comprising 10 or more consecutive nucleotides thereof; complementary nucleic acid molecules; compositions comprising said protein(s), nucleic acid(s) or antibody for vaccination, diagnosis or pharmaceutical use, preferably immunogenic compositions comprising said protein(s), and the use of said composition(s).

Invention 2. Claims: 2,4-15,17 (all partially)

A protein comprising an amino sequence according to SEQ ID NO:2 or comprising a fragment of at least 7 consecutive amino acids of said SEQ ID NO; an antibody binding to said protein(s); a nucleic acid encoding said protein(s), preferably comprising a nucleotide sequence according to SEQ ID NO:1 or a fragment comprising 10 or more consecutive nucleotides thereof; complementary nucleic acid molecules; compositions comprising said protein(s), nucleic acid(s) or antibody for vaccination, diagnosis or pharmaceutical use, preferably immunogenic compositions comprising said protein(s), and the use of said composition(s).

Inventions 3-1510. Claims: 2,4,-15,17 (all partially)

Same as invention 2 but for proteins limited to the even-numbered SEQ ID NOs:4-3020 except 2790, and for nucleic acids limited to the corresponding odd-numbered SEQ ID NOs:3-3019 except 2789. E.g., invention 3: limited to SEQ ID NO:4 and SEQ ID NO:3, invention 4: limited to SEQ ID NO:6 and SEQ ID NO:5, ..., invention 1509: limited to SEQ ID NO:3018 and SEQ ID NO:3017, and invention 1510: limited to SEQ ID NO:3020 and SEQ ID NO:3019.



INTERNATIONAL SEARCH REPORT

Box I Observations where certain claims were found unsearchabl (Continuation of item 1 of first sheet)	
This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:	
1. Claims Nos.: because they relate to subject matter not required to be searched by this Authority, namely:	
Claims Nos.: because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:	
3. Claims Nos.: because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).	
Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)	
This International Searching Authority found multiple inventions in this international application, as follows:	
see additional sheet	
As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.	
2. As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.	
3. As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.: 1. 3. 16. 18. (all completely): 2. 4-15. 17. (all partially). Inventions searched:	!
1,3,16,18 (all completely); 2,4-15,17 (all partially). Inventions searched: #1 (SEQ ID NOs 2789/2790), #2 (1/2), #222 (441/442), #246 (489/490), #602 (1201/1202), #729 (1455/1456), #874 (1745/1746), #1397 (2791/2792)	!
4. No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:	 -
Remark on Protest The additional search fees were accompanied by the applicant's protest.	
X No protest accompanied the payment of additional search fees.	

A. CLASSIFICATION OF SUBJECT MATTER
IPC 6 C12N15/31 C07K14/22 C07K16/12 C12Q1/68 A61K39/095
G01N33/50

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

 $\begin{array}{ll} \mbox{Minimum documentation searched (classification system followed by classification symbols)} \\ \mbox{IPC 6} & \mbox{C12N} & \mbox{C07K} & \mbox{C12Q} & \mbox{A61K} & \mbox{G01N} \\ \end{array}$

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	DATABASE TREMBL [Online] EMBL ID Q55666, AC Q55666, 1 November 1996 (1996-11-01) TABATA S: "Membrane-bound lytic transglycosylase A MltA Synechocystis sp. strain PCC 6803" XP002130156 Note: 100% aa seq identity of aa 342-350 with aa 392-400 of SEQ ID NOs 2790 and 2792, 27.6% (26.9%) aa seq identity with SEQ ID NO:2790 (2792) in 370 (387) aa overlap. the whole document	1,4-6,9,

X Further documents are listed in the continuation of box C.	Patent family members are listed in annex.
"A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier document but published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means "P" document published prior to the international filing date but later than the priority date claimed	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art. "&" document member of the same patent family
Date of the actual completion of the international search 26 May 2000	Date of mailing of the international search report 1 5 06. 00
Name and mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Authorized officer van de Kamp, M

X EP 0 818 465 A (BIOLOG MOLECULAIRE DES PLANTES; INST OF MOLECULAR BIOTECHNOLOG (DE) 14 January 1998 (1998-01-14) Note: 100% nt seq identity of nt 367951-367961 of SEQ ID NO:1 with nt 163-173 of SEQ ID NO:2789. page 108 A LOMMATZSCH J ET AL.: "Outer membrane localization of murein hydrolases: MltA, a third lipoprotein lytic transglycosylase in Escherichia coli" JOURNAL OF BACTERIOLOGY, vol. 179, no. 17, September 1997 (1997-09), pages 5465-5470, XP002130154 Note: 33.7% (35.7%) aa seq identity with SEQ ID NO:2790 (2792) in 273 (207) aa overlap. abstract A DILLARD J P ET AL.: "A peptidoglcan hydrolase similar to bacteriophage endolysins acts as an autolysin in Neisseria gonorrhoeae" MOLECULAR MICROBIOLOGY, vol. 25, no. 5, September 1997 (1997-09), pages 893-901, XP000878964 abstract A WO 96 29412 A (IAF BIO VAC INC; BRODEUR BERNARD R (CA); MARTIN DENIS (CA); HAMEL) 26 September 1996 (1996-09-26) cited in the application the whole document examples 1-12	
PLANTES ;INST OF MOLECULAR BIOTECHNOLOG (DE) 14 January 1998 (1998-01-14) Note: 100% nt seq identity of nt 367951-367961 of SEQ ID NO:1 with nt 163-173 of SEQ ID NO:2789. page 108 A LOMMATZSCH J ET AL.: "Outer membrane localization of murein hydrolases: MltA, a third lipoprotein lytic transglycosylase in Escherichia coli" JOURNAL OF BACTERIOLOGY, vol. 179, no. 17, September 1997 (1997-09), pages 5465-5470, XP002130154 Note: 33.7% (35.7%) aa seq identity with SEQ ID N0:2790 (2792) in 273 (207) aa overlap. abstract A DILLARD J P ET AL.: "A peptidoglcan hydrolase similar to bacteriophage endolysins acts as an autolysin in Neisseria gonorrhoeae" MOLECULAR MICROBIOLOGY, vol. 25, no. 5, September 1997 (1997-09), pages 893-901, XP000878964 abstract A WO 96 29412 A (IAF BIO VAC INC ;BRODEUR BERNARD R (CA); MARTIN DENIS (CA); HAMEL) 26 September 1996 (1996-09-26) cited in the application the whole document examples 1-12 WO 94 08013 A (OREGON STATE) 14 April 1994 (1994-04-14) the whole document	o claim No.
localization of murein hydrolases: MltA, a third lipoprotein lytic transglycosylase in Escherichia coli" JOURNAL OF BACTERIOLOGY, vol. 179, no. 17, September 1997 (1997-09), pages 5465-5470, XP002130154 Note: 33.7% (35.7%) aa seq identity with SEQ ID NO:2790 (2792) in 273 (207) aa overlap. abstract A DILLARD J P ET AL.: "A peptidoglcan hydrolase similar to bacteriophage endolysins acts as an autolysin in Neisseria gonorrhoeae" MOLECULAR MICROBIOLOGY, vol. 25, no. 5, September 1997 (1997-09), pages 893-901, XP000878964 abstract A WO 96 29412 A (IAF BIO VAC INC ;BRODEUR BERNARD R (CA); MARTIN DENIS (CA); HAMEL) 26 September 1996 (1996-09-26) cited in the application the whole document examples 1-12 A WO 94 08013 A (OREGON STATE) 1.4 April 1994 (1994-04-14) the whole document	11,12
hydrolase similar to bacteriophage endolysins acts as an autolysin in Neisseria gonorrhoeae" MOLECULAR MICROBIOLOGY, vol. 25, no. 5, September 1997 (1997-09), pages 893-901, XP000878964 abstract A WO 96 29412 A (IAF BIO VAC INC ;BRODEUR BERNARD R (CA); MARTIN DENIS (CA); HAMEL) 26 September 1996 (1996-09-26) cited in the application the whole document examples 1-12 A WO 94 08013 A (OREGON STATE) 14 April 1994 (1994-04-14) the whole document	12
BERNARD R (CA); MARTIN DENIS (CA); HAMEL) 26 September 1996 (1996-09-26) cited in the application the whole document examples 1-12 WO 94 08013 A (OREGON STATE) 14 April 1994 (1994-04-14) the whole document	12
14 April 1994 (1994-04-14) the whole document	18
	18
WO 92 13871 A (UNIV WASHINGTON) 20 August 1992 (1992-08-20) the whole document examples 1-10	18
BLAKE M S ET AL.: "Vaccines for gonorrhoea: where are we on the curve?" TRENDS IN MICROBIOLOGY, vol. 3, no. 12, December 1995 (1995-12), pages 469-474, XP000876514 the whole document	18
-/	

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	POOLMAN J T: "Development of a meningococcal vaccine" INFECTIOUS AGENTS AND DISEASE, vol. 4, no. 1, March 1995 (1995-03), pages	1-18
X	13-28, XP000876540 the whole document WO 96 01901 A (RHONE POULENC RORER SA; BLANC VERONIQUE (FR); THIBAUT DENIS (FR);) 25 January 1996 (1996-01-25) Note: 100% nt seq ident of bp 170-156 of SEQ ID NO:1 (rev DNA) with bp 202-216 of SEQ ID NO:1 (61.2% in 348 bp overlap), 40.7% seq ident of transl SEQ ID NO:1 with	8,11,12
X	SEQ ID NO:2 in 118 aa overlap. page 102-104 example 1 WO 97 37044 A (ASTRA AB ;ALM RICHARD A (US); SMITH DOUGLAS (US)) 9 October 1997 (1997-10-09)	4,12-14
	Note: 100% aa seq identity of aa 204-211, 186-193 & 352-359 of transl SEQ ID NOs 227, 345 & 1003, resp., with aa 59-66 of SEQ ID NO:2, 37.4% aa seq identity with SEQ ID NO:2 in 115 aa overlap. page 268-269 page 344 page 909-910 page 23, paragraph B.4	
X	DATABASE SWISSPROT [Online] ID YPCP_YEREN, AC P31485, 1 July 1993 (1993-07-01) BAEUMLER A J ET AL.: "Hypothetical 29.6 kD protein in PCP 5' region (ORF1)" XP002138650 Note: 100% aa seq identity of aa 148-159 with aa 140-151 of SEQ ID NO:442, 43.4% aa seq identity with SEQ ID NO:442 in 256 aa overlap.	4,12
A	the whole document -& BAUMLER A J ET AL.: "A lipoprotein of Yersinia enterocolitica facilitates ferrioxamine uptake in Escherichia coli" JOURNAL OF BACTERIOLOGY, vol. 174, no. 3, February 1992 (1992-02), pages 1029-1035, XP000907295 page 1031, left-hand column, line 11 -right-hand column, line 15	4,12



	Oitation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Category °	Citation of document, with indication, where appropriate, of the relevant passages	HOSTALL COMMITTEE
X	DATABASE SWISSPROT [Online] ID YDHH_HAEIN, AC P44861, 1 November 1995 (1995-11-01) FLEISCHMANN R D ET AL.: "Hypothetical protein H10753" XP002138651 Note: 100% aa seq identity of aa 143-156 with aa 140-153 of SEQ ID NO:442, 41.6% aa seq identity with SEQ ID NO:442 in 377 aa overlap. the whole document	4,12
X	WO 96 33276 A (HUMAN GENOME SCIENCES INC; UNIV JOHNS HOPKINS (US)) 24 October 1996 (1996-10-24) Note: 100% nt seq identity of bp 816794-816807 with bp 289-302 of SEQ ID NO:441 (54.3% in 484 bp overlap), 100% aa seq identity of translated sequence with SEQ ID NO:442 in 14 aa overlap. page 77.488 Note: 100% nt seq identity of bp 230516-230526 with bp 1501-1511 of SEQ ID NO:489 (57.4% in 1292 bp overlap), 100% aa seq identity of translated sequence with SEQ ID NO:490 in 13 aa overlap. page 77.139 page 77.139 page 76.37, line HI0215 Note: 100% nt seq identity of bp 1025409-1025418 with bp 1339-1330 (rev strand) of SEQ ID NO:1201 (72.0% in 50 bp overlap). page 77.612	4,8, 11-14
X	CONLIN C A ET AL.: "Escherichia coli prlC encodes an endopeptidase and is homologous to the Salmonella typhimurium opdA gene" JOURNAL OF BACTERIOLOGY, vol. 174, no. 18, September 1992 (1992-09), pages 5881-5997, XP000907300 Note: 100% nt seq ident of bp 1824-1837 with bp 1480-1493 of SEQ ID NO:489 (59.7% in 1282 bp overlap), 100% aa seq ident of aa 495-507 with aa 492-504 of SEQ ID NO:490 (49.5% in 679 aa overlap). abstract figure 2 -/	4,8,11,

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C.(Continua Category °	ation) DOCUMENTS CONSIDERED TO BE RELEVANT Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	DATABASE SWISSPROT [Online] ID OPDA HAEIN, AC P44573, 1 November 1995 (1995-11-01) FLEISCHMANN R D ET AL.: "Oligopeptidase A (EC 3.4.24.70)" XP002138652 Note: 100% aa seq identity of aa 496-508 with aa 492-504 of SEQ ID NO:490, 49.0% aa seq identity in 677 aa overlap. the whole document	4,12
X	ROKBI B ET AL.: "Evaluation of recombinant transferrin - binding protein B variants from Neisseria meningitidis for their ability to induce cross-reactive and bactericidal antibodies against a genetically diverse collection of serogroup B strains." INFECTION AND IMMUNITY, vol. 65, no. 1, January 1997 (1997-01), pages 55-63, XP002138643 abstract	5
P,A	DATABASE TREMBL [Online] EMBL ID 069750, AC 069750, 1 August 1998 (1998-08-01) ROKBI B ET AL.: "Transferrin binding protein B, TbpB, Neisseria meningitidis" XP002138653 Note: 22.3% aa seq identity with SEQ ID NO:1202 in 488 aa overlap. the whole document	4,8, 12-15,17
A	-& ROKBI B ET AL.: "Heterogeneity of tbpB, the transferrin-binding protein B gene, among serogroup B Neisseria meningitidis strains of the ET-5 complex" CLINICAL AND DIAGNOSTIC LABORATORY IMMUNOLOGY, vol. 4, no. 5, September 1997 (1997-09), pages 522-529, XP002138644 abstract/	5,8, 12-15,17

		PC1/05 99/09346		
· .	ation) DOCUMENTS CONSIDERED TO BE RELEVANT	Relevant to claim No.		
Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.		
A	DATABASE GCG_GENESEQ [Online] ID W14640, AC W14640, 5 March 1998 (1998-03-05) QUENTIN-MILLET M J ET AL.: "N. meningitidis HTR Tbp2 (del3777-385, del407-465, del488-508)" XP002138654 Note: 23.5% aa seq identity with SEQ ID N0:1202 in 571 aa overlap. the whole document	4,8, 12-15,17		
Α	-& WO 97 13860 A (PASTEUR MERIEUX SERUMS VACC; QUENTIN MILLET MARIE JOSE (FR); ROKBI)) 17 April 1997 (1997-04-17) claim 11	4,8, 12-15,17		
X	DATABASE EMPRO1 [Online] EMBL ID AF034831, AC AF034831, 4 December 1997 (1997-12-04) YOU Z ET AL.: "Rhizobium etli stomatin like protein (slp) gene, complete cds." XP002138655 Note: 100% nt seq ident of bp 4384-4395 with bp 529-540 of SEQ ID NO:1455 (54.4% in 638 bp overlap), 100% aa seq ident of aa 1394-1403 with aa 109-118 of SEQ ID NO:1456 (41.2% in 182 aa overlap). the whole document	4,8,11,		
P,X	-& YOU Z ET AL.: "A stomatin-like protein encoded by the slp gene of Rhizobium etli is required for nodulation competitiveness on the common bean" MICROBIOLOGY, vol. 144, no. 9, September 1998 (1998-09), pages 2619-2627, XP000907294 abstract figure 2	4,8,11, 12		
X	HUANG M ET AL.: "A stomatin-like protein necessary for mechanosensation in C. elegans" NATURE, vol. 378, no. 6554, 16 November 1995 (1995-11-16), pages 292-295, XP002138646 Note: 100% aa seq identity of aa 233-239 with aa 110-117 of SEQ ID NO:1456, 29.9% aa seq identity in 234 aa overlap. abstract figure 1	4,12		

		PC1/03 99/09340			
	C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT Category Citation of document, with indication, where appropriate, of the relevant passages Relevant to claim No.				
Category	Citation of document, with indication, where appropriate, or the relevant passages	neevan to dam No.			
X	WONG C Y ET AL.: "Cloning and characterization of two immunophilin-like genes, ilpA and fkpA, on a single 3.9-kilobase fragment of Aeromonas hydrophila genomic DNA" JOURNAL OF BACTERIOLOGY, vol. 179, no. 11, June 1997 (1997-06), pages 3397-3403, XP002138647 Note: 100% nt seq ident of bp 2659-2672 with bp 613-626 of SEQ ID NO:1745 (59.2% in 655 bp overlap), 100% aa seq ident of aa 205-216 with aa 200-211 of SEQ ID NO:1746 (44.9% in 265 aa overlap). abstract figure 2	4,8, 11-14			
X	DATABASE EMPRO2 [Online] EMBL ID NE01198, AC U001198, 23 November 1993 (1993-11-23) MCALLISTER C F ET AL.: "Neisseria elongata NRL FKBP immunophilin homolog gene" XP002138656 Note: 100% nt seq identity of bp 125-138 with bp 635-648 of SEQ ID NO:1745 (65.8% nt seq identity in 237 bp overlap). the whole document	8,11,12			
X	-& MCALLISTER C F ET AL.: "Analysis in Neisseria meningitidis and other Neisseria species homologous to the FKBP immunophilin family" MOLECULAR MICROBIOLOGY, vol. 10, no. 1, October 1993 (1993-10), pages 13-23, XP000907304 abstract figure 3	8,11,12			
X	SAMPSON B A ET AL.: "Neisseria meningitidis encodes an FK506-inhibitable rotamase" PROC. NAT'L. ACAD. SCI. USA, vol. 89, no. 4, 15 February 1992 (1992-02-15), pages 1164-1168, XP002138648 Note: 100% nt seq identity of bp 278-288 (284-294) with bp 719-729 of SEQ ID NO:1745 (60.5% nt seq identity in 281 bp overlap). abstract figure 2	8,11,12			

al Application No PCT/US 99/09346

		·			C1/U3 3	19/09346
Patent docume cited in search re		Publication date	F	Patent family member(s)		Publication date
EP 0818465	Α	14-01-1998	EP WO	0917582 9802560		26-05-1999 22-01-1998
WO 9629412		26-09-1996	AU AU BR CA CZ EP HU JP NO PL SI SK	716225 4934396 9607651 2215161 9702914 0815234 9702387 11500624 974264 322363 9620035 125597	A A A A A A A A A A A A A A	24-02-2000 08-10-1996 17-11-1998 26-09-1996 14-01-1998 07-01-1998 28-05-1998 19-01-1999 13-11-1997 19-01-1998 31-12-1998 03-06-1998
WO 9408013	Α	14-04-1994	AU	5403594	Α	26-04-1994
WO 9213871	Α	20-08-1992	AU US	1411492 5834591		07-09-1992 10-11-1998
WO 9601901	A	25-01-1996	FR AP AU BR CA CZ EP HU JP NO NZ PL SK TR ZA	2722210 562 712397 2891295 9508714 2193130 1152338 9700052 0770132 77341 10502532 970047 289153 318193 597 960040 9505688	A B A A A A A A A A A A A A A A A A A A	12-01-1996 20-11-1996 04-11-1999 09-02-1996 02-06-1998 25-01-1996 18-06-1997 14-05-1997 02-05-1997 30-03-1998 10-03-1998 07-01-1997 25-02-1999 26-05-1997 06-08-1997 21-06-1996 26-02-1996
WO 9737044	Α	09-10-1997	AU BR CA CN CZ EP JP 20 NO PL SK	2598497 9708456 2248985 1220703 9802976 0901530 000501621 984517 329045 130598	A A A A T A A	22-10-1997 03-08-1999 09-10-1997 23-06-1999 17-02-1999 17-03-1999 15-02-2000 25-11-1998 01-03-1999 11-06-1999
WO 9633276	A	24-10-1996	AU CA EP JP	5552396 2218741 0821737 11501520	A A	07-11-1996 24-10-1996 04-02-1998 09-02-1999
WO 9713860	Α	17-04-1997	FR AU	2739624 7221396		11-04-1997 30-04-1997

INTER ONAL SEARCH REPORT

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C/Continu	Stion) DOCUMENTS CONSIDERED TO BE DELEVANT	PC1703 99709340
Category °	ation) DOCUMENTS CONSIDERED TO BE RELEVANT Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
		, receptant to opanini vo.
A	HACKER J ET AL.: "Immunophilins: structure-function relationship and possible role in microbial pathogenicity." MOLECULAR MICROBIOLOGY, vol. 10, no. 3, November 1993 (1993-11), pages 445-456, XP000907321 abstract	13,14,17
X	DATABASE EMPRO1 [Online] EMBL ID ECUW93, AC U14003 (partial), 30 November 1994 (1994-11-30) BURLAND V ET AL.: "Escherichia coli K-12 chromosomal region from 92.8 to 00.1 minutes" XP002138657 Note: 100% nt seq identity of bp 37827-37839 with bp 1186-1174 of SEQ ID NO:2791. page 4	8,11,12
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INTE' IONAL SEARCH REPORT

Information on patent family members

PCT/US 99/09346

Patent document cited in search report	Publication	Patent family	Publication
	date	member(s)	date
WO 9713860 A		EP 0796332 A HU 9801714 A JP 11500630 T NO 972314 A	24-09-1997 28-10-1998 19-01-1999 18-07-1997

Form PCT/ISA/210 (patent family annex) (July 1992)